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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,665	12/30/2003	Qinghua Li	42P17465	9750
8791	7590	11/29/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			TRAN, THUY V	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/749,665

Applicant(s)

LI ET AL.

Examiner

Thuy V. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment submitted 09/15/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-22 is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This is a response to the Applicants' amendment submitted on 09/15/2005. In virtue of this amendment, claims 1-22 remain pending in the instant application.

Upon reviewing the teachings of prior art of record, the indicated allowability of claims 6-15 in the Office Action mailed on 07/26/2005 is hereby withdrawn. The rejections of these claims are being made as follows:

Claim Objections/ Minor Informalities

1. Claims 1, 6, and 20-21 are objected to because of the following informalities:

Claim 1, line 5, "provides" should be changed to --form--;

Claim 6, line 3, "the" should be changed to --a--;

Claim 20, line 2, "the" (second occurrence) should be changed to --a--;

Claim 21, line 3, --of the display-- should be inserted between "corner" and ".";

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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3. Claims 1-4 and 6-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Okawa et al. (Pub. No.: US 2004/0038713 A1).

With respect to claim 1, Okawa et al. discloses, in Figs. 3A-8, a system comprising (1) a mobile station [30], and (2) an access point [10] that includes a first [11b1] and second [11b2] sectored antenna (see Figs. 4, 6A-B; paragraph [0038]) to operate simultaneously in a transmit mode (see Fig. 6A-B), where a combination of the first [11b1] and second [11b2] sectored antennas provides a virtual omni-directional antenna (see Figs. 6A-B).

With respect to claim 2, Okawa et al. discloses that the first sectored antenna [11b1] transmits a first tone (or signal, which appears to be 3b; see Figs. 6A-B) and the second sectored antenna [11b2] transmits a second tone (or signal, which appears to be 4a; see Figs. 6A-B) differing from the first tone.

With respect to claim 3, Okawa et al. discloses that the first sectored antenna [11b1] transmits a first signal (which is 3b; see Figs. 6A-B) and the second sectored antenna [11b2] transmits the first signal delayed in phase from the first signal (which is 4a; see Figs. 6A-B).

With respect to claim 4, Okawa et al. discloses that the access point [10] further includes an omni-directional antenna (since the access point [10] has a plurality of sectors, each of which has a sector antenna which is an omni-directional antenna; see paragraphs [0037, 0038]).

With respect to claim 6, Okawa et al. discloses, in Figs. 3A-8, a communications network comprising an access point [10] having at least two omni-directional antennas [11b1, 11b2], where a first omni-directional antenna is formed by a combination of multiple sectored antennas (see Figs. 6A-B; paragraphs [0037, 0038]).

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With respect to claim 7, Okawa et al. discloses that the combination of multiple sectored antennas includes a first sectored antenna having a sector to cover a radiation pattern of substantially 0 to 90 degrees and another sector to cover a radiation pattern of substantially 180 to 270 degrees (since the access point has six sectors, each of which has a sectored antenna which is an omni-directional antenna; see Figs 2A-B, 3A-B, 4, 6A-B; paragraphs [0036, 0037, 0038]).

With respect to claim 8, Okawa et al. discloses that the combination of multiple sectored antennas includes a second sectored antenna having a sector to cover a radiation pattern of substantially 90 to 180 degrees and another sector to cover a radiation pattern of substantially 270 to 360 degrees (since the access point has six sectors, each of which has a sectored antenna which is an omni-directional antenna; see Figs 2A-B, 3A-B, 4, 6A-B; paragraphs [0036, 0037, 0038]).

With respect to claim 9, Okawa et al. discloses that the combination of multiple sectored antennas includes first and second sectored antennas, the first sectored antenna having a radiation pattern of substantially 0 to 180 degrees and the second sectored antenna having a radiation pattern of substantially 180 to 360 degrees (since the access point has six sectors, each of which has a sectored antenna which is an omni-directional antenna; see Figs 2A-B, 3A-B, 4, 6A-B; paragraphs [0036, 0037, 0038]).

With respect to claim 10, Okawa et al. discloses that the first sectored antenna [11b1] transmits a first signal (which is 3b; see Figs. 6A-B) and the second sectored antenna [11b2] transmits the first signal delayed in phase from the first signal (which is 4a; see Figs. 6A-B).

With respect to claim 11, Okawa et al. discloses that the combination of multiple sectored antennas includes three sectored antennas having radiation patterns that combine to form the first omni-directional antenna (since the access point has six sectors, each of which has a sectored antenna which is an omni-directional antenna; see Figs 2A-B, 3A-B, 4, 6A-B; paragraphs [0036, 0037, 0038]).

With respect to claim 12, Okawa et al. discloses that the three sectored antennas include a first sectored antenna having a radiation pattern of substantially 0 to 90 degrees, a second sectored antenna having radiation patterns to a cover substantially 90 to 180 degrees and 270 to 360 degrees, and a third sectored antenna having a radiation pattern of substantially 180 to 270 degrees (since the access point has six sectors, each of which has a sectored antenna which is an omni-directional antenna; see Figs 2A-B, 3A-B, 4, 6A-B; paragraphs [0036, 0037, 0038]).

With respect to claim 13, Okawa et al. discloses that the combination of multiple sectored antennas includes four sectored antennas having radiation patterns that combine to form the first omni-directional antenna (since the access point has six sectors, each of which has a sectored antenna which is an omni-directional antenna; see Figs 2A-B, 3A-B, 4, 6A-B; paragraphs [0036, 0037, 0038]).

With respect to claim 14, Okawa et al. discloses that the four sectored antennas each cover a radiation pattern of about 0 degree to 90 degrees and are appropriately positioned to form the first omni-directional antenna (since the access point has six sectors, each of which has a sectored antenna which is an omni-directional antenna; see Figs 2A-B, 3A-B, 4, 6A-B; paragraphs [0036, 0037, 0038]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okawa et al. (Pub. No.: US 2004/0038713 A1) in view of Ueda (U.S. Patent No. 5,548,807).

With respect to claims 5 and 15, Okawa et al. discloses all of the claimed subject matter, as expressly recited in claims 1 and 6 respectively, except for specifying that the mobile station includes first and second sectored antennas.

Ueda discloses, in Fig. 4, a mobile communication system comprising a mobile station configured with sectored antennas [208₁, 213₁].

It would have been obvious to one of ordinary skills in the art at the time of the invention to implement the mobile station of the system of Okawa et al. by arranging in it a first and second sectored antennas to obtain effective communications with its access point and to ensure an accurate carrier/interference wave ratio since such a configuration of the sectored antennas in the mobile station for the stated purpose has been well known in the art as evidenced by the teachings of Ueda (see col. 2, lines 45-46).

Allowable Subject Matter

6. Claims 16-22 are allowed.
7. For clarity, claims 20 and 21 must be corrected to overcome the objections set forth in this Office Action to be allowed following the allowability of claims 16 and 18 upon which they depend.
8. The following is a statement of reasons for the indication of allowable subject matter:
Prior art fails to disclose or fairly suggest:
 - A receiver system of an access point where at least one of the two omni-directional antennas is a combination of two complimentary placed sectored antennas, in combination with the remaining claimed limitations as called for in independent claim 16 (claims 17-22 are allowed since they are dependent on claim 16).

Citation of relevant prior art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Ofek et al. (Pub. No.: US 2004/0196813 A1) discloses a multi-sector antenna apparatus.

Prior art Regnier et al. (U.S. Patent No. 6,933,887 B2) discloses a method and apparatus for adapting antenna array using received predetermined signal.

Prior art Proctor, Jr. (U.S. Patent No. 6,473,036 B2) discloses a method and system for adapting antenna array to reduce time while increasing array performance.

Remarks and conclusion

10. Applicant's arguments with respect to amended claim 1 in pages 6 and 7 have been considered but are moot in view of the new ground(s) of rejection.

In regard to claims 1-4 and 6-14, the prior art of record to Okawa et al. discloses all of the claimed subject matter contained therein. Therefore, these claims are rejected as being anticipated by the teachings of Okawa et al. (see "Claim Rejections – 35 USC § 102" above for details).

In regard to claims 5 and 15, Okawa et al. discloses all of the claimed subject matter, as expressly recited in claims 1 and 6 respectively, except for specifying that the mobile station includes first and second sectored antennas. Such a deficiency would have been obviously cured by the teachings of the cited prior art to Ueda (see "Claim Rejections – 35 USC § 103" above for details). Therefore, claims 5 and 15 are rejected as being unpatentable over the combined teachings of Okawa et al. and Ueda.

Inquiry

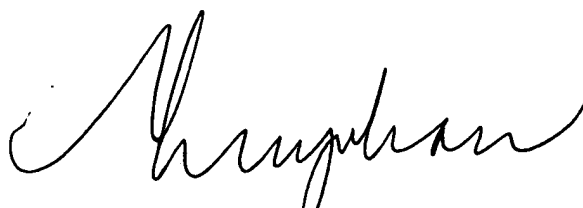
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/27/2005

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is written over a light gray grid background.

THUY V. TRAN
PRIMARY EXAMINER